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EPA Superfund
Record of Decision:

ANACONDA ALUMINUM CO./MILGO ELECTRONICS CORP.
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Record of Decision
Summary of Remedial Alternative Selection

Anaconda Aluminum/Milgo Electronics Site
Miami, Florida

Prepared by:
U.S. Environmental Protection Agency
Region IV
Atlanta, Georgia

DECLARATION FOR THE
RECORD OF DECISION

SITE NAME AND LOCATION

Anaconda Aluminum/Milgo Electronics Site
Miami, Florida

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected remedial action for the Anaconda Aluminum/Milgo Electronics Site in Miami, Florida. The remedy for the site was chosen in accordance with the Comprehensive Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) 42 U.S.C. Section 9601 et.seq., and to the extent practicable, the National Contingency Plan (NCP), 40 CFR Part 300. This decision is based on the administrative record file for this site.

In accordance with 40 CFR 300.430, the State of Florida, as represented by the Florida Department of Environmental Protection (FDEP), has been the support agency during the Remedial Investigation process for the Anaconda Aluminum/Milgo Electronics site. Based upon comments received from FDEP, EPA anticipates that concurrence on this Record of Decision will be forthcoming; however, EPA has not yet received a formal letter of nonconcurrence.

DESCRIPTION OF THE SELECTED REMEDY

This remedy applies to site-related soil and groundwater contamination. Due to past soil remediation and the presence ofow concentrations of groundwater contaminants that do not exceed health-based levels, no further action is necessary to address the Anaconda/Milgo Site. Four post-RI supplemental sampling events will take place in order to verify that no site-related release of contaminants is occurring. As of the writing of this Record of Decision, one post-RI sampling event had already been completed and indicated that the original contaminants found during the RI were no longer present on the site. If the results of the monitoring show that there is no unacceptable risk from exposure to site-related contaminants in the groundwater, then the site will be considered for deletion from the National Priorities List (NPL). However, should groundwater monitoring indicate that the site poses a threat to human health or the environment, EPA, in consultation with the State of Florida, will reconsider the protectiveness of the "No Action with Monitoring" alternative and the feasibility of groundwater remediation will be re-evaluated.

DECLARATION STATEMENT

Based on the results of the Remedial Investigation and Risk Assessment conducted for the Anaconda Aluminum/Milgo Electronics Site, EPA has determined that no further action is necessary to ensure the protection of human health and the environment, and that the selected remedy is protective of human health and the environment. The five-year review will not apply to this action because this remedy will not result in hazardous substances remaining on-site above health-based levels. EPA has determined that with the exception of supplemental groundwater sampling, its response at this site is complete. Therefore, the site now qualifies for inclusion on the Construction Completion List.

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Richard D. Green, Associate Director Date

Office of Superfund and Emergency Response

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ANACONDA ALUMINUM/MILGO ELECTRONICS SITE
MIAMI, FLORIDA

1.0 SITE NAME, LOCATION, AND DESCRIPTION

The Anaconda Aluminum/Milgo Electronics (Anaconda/Milgo) Site is located in Dade County An the 3600 block of N.W. 76th Street in Miami, Florida. The Anaconda/Milgo site is approximately 3 acres of land along the north and south sides of N.W. 76th Street, the portion on the north is the Milgo property and the portion on the south is the Anaconda property (Figure 1). There are two sites in the area that the Florida Department of Environmental Protection (FDEP) has in the past or is currently investigating for possible releases of hazardous substances. One site is 700 feet due east of Anaconda/Milgo and is under investigation for Volatile Organic Compounds (VOCs) in the soil and groundwater. The second site is approximately 2500 feet northwest of Anaconda/Milgo and has been investigated for polychlorinated biphenyls and VOCs in soil and groundwater. The site area is zoned commercial/industrial; however, a trailer park lies due east of the site between Anaconda/Milgo and one of the sites that is under investigation by FDEP.

2.0 SITE HISTORY AND ENFORCEMENT ACTIVITIES

Anaconda Aluminum Company operated an aluminum anodizing facility on the Anaconda property from approximately 1957 to 1977. The Atlantic Richfield Company acquired the Anaconda Aluminum Company in 1977 and operated the facility until February 1982, when all processes ended and the Anaconda property was sold to the current owner, Dade Metals Corporation in October 1983. The property was used for storing lumber and rebar by a tenant, JRD Forming Company. JRD is no longer a tenant and the property is currently not in use. The aluminum anodizing operations utilized an electrochemical processing acid and a caustic base to produce a film of protective oxide on aluminum. Wastewater from the process was discharged into an onsite percolation pit, permitted by the Metropolitan Dade County Environmental Resources Management (issued May 17, 1979). The percolation pit was filled in when the facility ceased operations.

Milgo Electronics, producers of communications and data processing equipment, conducted electroplating, manufacturing, painting, and packaging operations at the Milgo property from 1961 until 1984. Wastewater from chemical rinses, metal plating, and spray coating were treated onsite in a treatment system designed to precipitate dissolved metal from the wastewater.

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The precipitated sediment was removed by a tank truck and the remaining liquid was discharged to a drainfield on the property. Racal-Datacom, Inc. became the successor to Milgo Electronics Corporation. The Milgo facility was closed in 1984 and 1985 in accordance with a closure plan approved by the Florida Department of Environmental Regulation. As part of the closure, them drainfield, batch waste holding tank, and all process vessels were drained and their contents disposed of at approved sites.

Preliminary and expanded site investigations determined that there was potential impact to the environment by inorganic contaminants, in particular chromium, lead, and aluminum. The site was placed on the National Priorities List (NPL) in August of 1990. General and Special Notice Letters were sent out beginning in August of 1991 and ending in April of 1992. The Administrative Order by Consent for the Remedial Investigation/Feasibility Study (RI/FS) was signed on July 31, 1992 and later amended in November of 1992. Additional sampling was conducted prior to the RI/FS and based upon these results, a removal action was conducted in 1993 to remove a significant portion of the contamination at the site. The removal activities addressed soil and treatment structures known to contain elevated levels of metals and organics

and included; removal of liquids and sludge from the settling tank, drainfield, batch tank, and underground circular structure and sump with the liquid and sludge being pumped into 55 gallon drums for disposal at an approved offsite location, the testing of the sump (no leakage was observed other than the exit pipe), decontamination and removal/filling of structures with cement slurry, and finally excavation of the drainfield to a 6-7 foot depth below land surface in a 50 foot long by 7 foot wide trench. Post-removal sampling results indicated that the removal was successful.

3.0 HIGHLIGHTS OF COMMUNITY PARTICIPATION

Community interviews were conducted by EPA in January 1993 to determine public interest in the Anaconda/Milgo site. The conclusion drawn from these interviews is that there is minimal interest in the Anaconda/Milgo Site, probably due to the heavy industrial setting around the site. EPA held an Availability Session at the North Central Library on January 21, 1993 to provide information and answer questions on the interim removal action and the RI/FS to be conducted at the site. Three residents attended and indicated an interest in learning more about the site, including the impact the site would have on drinking water supplies, and questions about the Superfund process. Minimal questions were raised regarding site-related health and/or environmental concerns.

The RI, Risk Assessment, and Proposed Plan for Anaconda/Milgo Site were released to the public in March of 1994.

These documents were made available in both the administrative record and at the information repository maintained at the EPA Records Center in Region IV, Atlanta, Georgia and at the North Central Library in Miami, Florida. The notice of availability for these two documents was published in the Miami Herald. A public count period was held from September 19, to October 18, 1994. In addition, a public meeting was held on September 79, 1994 in Miami, Florida which no one attended. As mentioned earlier, this is probably due to the fact that the site area is heavily industrial. The decision for this site is based on the administrative record. These community relations activities fulfill the statutory requirements for public participation contained in CERCLA section 113(k) (2) (B) (i-v) and section 117.

4.0 SCOPE AND ROLE OF OPERABLE UNIT

During the initial stages of negotiations, the Anaconda/Milgo site was divided into tree operable units (an operable unit for soil at each property location and one operable unit to address groundwater at both properties). However, subsequent to these negotiations, all three operable units were combined into one for the purpose of the RI/FS and Baseline Risk Assessment activities. The response action in this ROD is for all three operable units at the Site. Extensive cleanup efforts during the removal action and results of the Risk Assessment, suggest that if no further action were taken at this site, present site conditions would be protective of human health and the environment. The response actions are consistent with the NCP (40 CFR Part 300).

5.0 SUMMARY OF SITE CHARACTERISTICS

5.1 CLIMATE

Miami is located in South Florida in an area dominated by tropical air masses. The average annual temperature is 76°F; the average low annual temperature is 68°F. The average annual precipitation for the area is 56 inches. Surface meteorological data obtained from the Miami International Airport indicate a general east to southeasterly flow of air in this region.

5.2 SURFACE HYDROLOGY

Figure 5-1 displays potential surface drainage patterns on and near the site. Surface drainage consists of sheetflow from building and the asphalt/concrete paved areas that make up the majority of the site. This flow discharges to box drains on site and catch basins along the roadway. It is uncertain whether or not the catch basins are components of a municipal stormwater drainage system or merely parts of a local infiltration device. Stormwater accumulation was observed in two areas along the eastern portion of the site. Accumulated water in these arenas would typically evaporate and/or infiltrate within 24 hours of a storm event. The nearest surface water bodies are the Little River Canal which lies approximately 1.5 miles north of the site area and the Miami Canal which lies approximately 2 miles south of the site area.

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5.3 GEOLOGY AND HYDROGEOLOGY

The following surficial and lithologic units occur in southeast Florida in the vicinity of the Anaconda/Milgo site and are given in order of youngest to oldest: the Recentage Lake Flirt Marl, the Pamlico Sand, the Miami Oolite , the Anastasia Formation, Key Largo Limestone, the Pleistocene units, the Pliocene Caloosahatchee Marl, the Miocene age Tamiami Formation, and the Hawthorn Group. The sands, sandstone, and limestone beneath the site form part of the Biscayne Aquifer, the primary drinking water source in Broward and Dade Counties. The aquifer is thickest near the coast and it thins and pinches out in the western reaches of Dade and Broward Counties. The aquifer is comprised primarily of unconsolidated quartz sands in approximately the upper 50 feet and it becomes more calcareous and consolidated with depth. Below a depth of 75 feet the aquifer is comprised of semiconsolidated sandstone and limestone that are interlayered. The limestone is more transmissive than either the unconsolidated sand or sandstone; it is from the more transmissive zones of the limestone that water supplies are drawn. Transmissivity of the Biscayne Aquifer ranges from 5.4 X 104 ft^2/day where the aquifer is mostly sand to greater than 1.6 X 106 ft^2/day in the limestone-rich areas. Regional flow of ground water is to the southeast; however, the direction of flow may be influenced by the Preston-Hialeah wellfield which may impart a southwestern flow direction.

5.4 RESULTS OF THE REMEDIAL INVESTIGATION

The purpose of the Remedial Investigation (RI) is to gather and analyze sufficient data to characterize the site in order to perform the Baseline Risk Assessment, which determines the site's impact on human health and the environment. Both the RI and Risk Assessment are used to determine whether further remedial action is necessary at the site.

The RI was designed to focus on the remaining areas of potential contamination not addressed during the removal action. All field investigation activities at the Anaconda/Milgo site were conducted and completed during April and May of 1993.

During this period, samples of soil, groundwater, and sediment were collected to determine the nature and extent of contamination at the Site. During this investigation, 107 soil screening samples were collected to determine extent of contamination by evaluating chromium concentration in soil. An additional 39 soil samples were collected from locations targeting suspected source areas to characterize the nature of contamination by analyzing for the Target Compound List (TCL) and the Target Analyte List (TAL) (See Figures 5-2, 5-3). Groundwater was sampled from 3 depth intervals, 20 feet, 40 feet, and 70 feet) at 9 locations and from 20 feet at an additional location. Locations were chosen to provide upgradient and downgradient data for both the historic direction of flow and the direction of flow currently suspected under the pumping

influence of the Hialeah Preston Wellfield (See Figure 5-4). These samples were analyzed by both screening and TAL/TCL methods. Sediment samples were collected from storm drains around the site (See Figure 5-5). These samples were analyzed for chromium by screening methods, and selected storm drains were sampled and analyzed for TAL/TCL constituents.

The sampling results for surface soils are presented in Table 5-1. A total of eight inorganics and four organics were detected in the soils at the site. Inorganics, such as, aluminum, chromium, copper, lead, manganese, and zinc were detected frequently in soil samples from both Anaconda and Milgo. Aluminum, chromium, lead, and zinc were found at elevated concentrations primarily in the two potential disposal areas near the former treatment structures and possible location of the former percolation pond on the Anaconda property. The highest concentrations of chromium and other inorganics were found in surface samples from the alley between the former Milgo building and the former Elgin Watch Company. Results indicate that average soil concentrations for chromium in background samples was exceeded in 6 surface (0 - 2 feet) and 8 subsurface (2 - 10 feet) samples from the Anaconda property, and 16 surface and 2 subsurface samples from the Milgo property. Almost all of the Chromium (97%) was found to be in the less toxic trivalent form.

The sampling results for groundwater are also present in Table 5-1. For total chromium, none of the groundwater samples had concentrations greater than the State and Federal drinking water standard of 100 ug/1 except AM-GW-07-01. This well alpha 1 located near the probable location of the former Anaconda percolation pit, was constructed by NUS in 1987. An NUS report indicated that the well was constructed without a sand pack around the screen. Subsequent resampling employing methods to minimize turbidity resulted in a sample that did not contain detectable chromium.

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Anaconda/Milgo site
Miami, Florida

SURFACE SOIL	UNITS	MINIMUM	MAXIMUM	AVERAGE	DETECTS	SAMPLES
Bis (2-ethylhexyl)Phthalate	ug/kg	9400	100,000	39,767	3	18
Benzo (b and/or k) flouranthene	ug/kg	930	930	930	1	18
Benzo(a)pyrene	ug/kg	320	330	325	2	18
4,4'DDE	ug/kg	1.5	2000	330	8	18
Aluminum	mg/kg	110	31,000	4282	18	18
Arsenic	mg/kg	6.4	6.4	6.4	1	16
Barium	mg/kg	8.8	1100	385	3	18
Chromium VI	mg/kg	0.45	2.2	1.4	5	15
Copper	mg/kg	4	750	132	8	18
Lead	mg/kg	1.7	790	92.9	16	74
Manganese	mg/kg	4.2	160	38	15	18
Mercury	mg/kg	0.16	2.93	1.5	2	18

GROUNDWATER	UNITS	MINIMUM	MAXIMUM	AVERAGE	DETECTS	SAMPLES
1,2-dichloroethene	ug/l	10	110	53	7	25
Vinyl Chloride	ug/l	37	37	37	1	25
Aldrin	ug/l	0.018	0.018	0.018	1	25
Arochlor-1248	ug/l	0.91	0.91	0.91	1	25
Arsenic	ug/l	12	12	12	1	25
Chromium	ug/l	11	280	69	7	25
Lead	ug/l	4.3	31	13.7	3	25
Manganese	ug/l	16	70	27.2	10	25

Although chlorinated volatile organic compounds (VOCs) 1,2-dichloroethene and vinyl chloride were detected in deep groundwater samples, evidence suggests that these chemicals may or may not be associated with releases from activities at the Anaconda/Milgo site. The specific contaminants that were found in the deep wells have been cited as an area-wide groundwater condition, detected at concentrations similar to those found during this study in an 80 square mile area that includes the location of the Anaconda/Milgo site. Determination of the nature and extent of VOC contamination associated with the Anaconda/Milgo site is confounded by the presence of multiple other sources of contamination. The sites closest to the Site are the Ace Parker Site and General Electric Apparatus Company which are documented sources of VOCs to the groundwater. Also important to note is that the VOC products that were found at the Anaconda/Milgo site are considered to be degradation products, but there is a lack of parent compounds found on the site to substantiate the presence of these degradation products. In addition, the majority of these products were found only in the deeper wells, not in the shallow or intermediate wells. However, FDEP has suggested that the contaminants may have been associated with past operations.

Storm drain sediment results indicate that with the exception of one sample, impact would be minimal. The one sample location collects storm water from the eastern portion of the Anaconda property; however, this location is completely covered by asphalt and has been since 1985. Manufacturing process activities at the site, particularly in the treatment areas, is well known and understood. The study area was been extensively modified by land development for commercial purposes. The site is predominantly paved, including areas used in the past for wastewater disposal. These waste source areas have been unused for many years. Fate and transport experimentation (See Appendix F of the RI Report) on site-specific soil indicates that chromium and lead in the soil at the site would not produce significant levels of dissolved chromium or lead in groundwater and the site data supports these conclusions.

6.0 SUMMARY OF SITE RISKS

A Baseline Risk Assessment was conducted as part of the RI to estimate the health or environmental threats that could result if no further action were taken at the Anaconda/Milgo site. Results are contained in the Final Baseline Risk Assessment Report. A Baseline Risk Assessment represents an evaluation of the risk posed if no remedial action is taken. The assessment considers environmental media and exposure pathways that could result in unacceptable levels of exposure now or in the foreseeable future. Data collected and analyzed during the RI provided the basis for the risk evaluation. The risk assessment process can be divided into four components: contaminant identification, exposure assessment, toxicity assessment, and risk characterization.

6.1 CONTAMINANTS OF CONCERN

The objective of contaminant identification is to screen the information that is available on hazardous substances present at the site and to identify contaminants of concern (COCs) in order to focus subsequent efforts in the risk assessment process. COCs are selected based upon their toxicological properties, concentrations and frequency of occurrence at the site. Contaminants in subsurface soils were not considered to be chemicals of potential concern for the risk assessment. An analysis of the leaching potential of subsurface soils present in the RI Report concluded that contaminant concentrations in subsurface soils were not presenting a likely threat to the underlying groundwater. Based on the data evaluation and screening steps necessary, the following were selected as chemicals of potential concern for quantitative evaluation of risk.

SURFACE SOIL: Bis(2-ethylhexyl)phthalate, Benzo(b and/or k)fluoranthene, Benzo(a)pyrene, 4,4'DDE, Aluminum, Arsenic, Barium, Chromium VI, Copper, Lead, Manganese, and Mercury

GROUNDWATER: 1,2-Dichloroethene, Vinyl Chloride, Aldrin, Aroclor-1248, Arsenic, Chromium, Lead, and Manganese.

6.2 EXPOSURE ASSESSMENT

An exposure assessment was conducted to estimate the magnitude of exposure to the contaminants of concern at the site and the pathways through which these exposures could occur. The results of this exposure assessment are combined with chemical-specific toxicity information to characterize potential risks. Human receptors on or near the site were characterized under current and potential future land use scenarios. The exposure parkways evaluated quantitatively for the current use scenario were incidental ingestion of soil, inhalation of particulates from the soil, and dermal absorption of soil for an adult worker any child trespasser. The pathways evaluated under the future use scenario, include the three mentioned above as well as ingestion of groundwater and inhalation of VOCs during showering again for the adult worker and child trespasser as well as the adult and child resident. Since no drinking water wells are known to be contaminated, exposure to contaminants detected in groundwater is not a currently complete exposure route. According to subjection 24-12 (Environmental Protection) of the Dade County Code, "No water supply well shall be constructed or used until a written approval from DERM has been received...." In addition, also in this same subsection it is stated "When an approved public water main is made available and operative in a public right-of-way or easement abutting the property, any existing individual potable water supply system, device, or equipment shall within ninety (90) days, be abandoned and the source of potable water for the residence or building shall be from the approved public water supply main." A public water main does exist within the vicinity of the site. Please see Table(s) 3 and 4 of the Baseline Risk Assessment for the quantitative results of the exposure assessment.

6.2.1 Land Use

Study area land use northwest, west, and south of the subject site includes light industrial and commercial. A number of the business structures in the site area are vacant. A small residential apartment building is located north of the Milgo property. A residential trailer park is located east of the site. Generally, land use within a 1-mile radius of the site can be described as commercial/industrial.

6.3 TOXICITY ASSESSMENT

The purpose of a toxicity assessment is to weigh available evidence regarding the potential of the contaminants of concern to cause adverse effects in exposed individuals and to provide an estimate of the relationship between the extent of exposure and the likelihood of adverse effects. The toxicity assessment is based on toxicity values which have been derived from quantitative dose-response information. Toxicity values for cancer are known as slope factors (SFs) and those determined for noncarcinogenic effects are referred to as reference doses (RfDs).

Slope factors (SFs), which are also known as cancer potency factors (CPFs), have been developed by EPA's Carcinogenic Assessment Group for estimating excess lifetime cancer risks associated with exposure to potentially carcinogenic chemicals. SFs, which are expressed in units of (mg/kg-day)-1, are multiplied by the estimated intake of a potential carcinogen, in mg/kg-day, to provide an upper-bound estimate of the excess lifetime cancer risk associated with exposure at that intake level. The term "upper-bound" reflects the conservative estimate of the risks calculated from the SF. Use of this approach makes underestimation of the actual cancer risk highly unlikely. SFs are derived from the results of human epidemiological studies or chronic animal bioassays to which animal-to-human extrapolation and uncertainty factors have been applied. Cancer slope factors for the potential contaminants of concern may be found in Table 6

of the Baseline Risk Assessment.

Reference doses (RfDs) have been developed by EPA for indicating the potential for adverse health effects from exposure to chemicals exhibiting noncarcinogenic effects. RfDs, which are expressed in units of mg/kg-day, are estimates of lifetime daily exposure levels for humans, including sensitive individuals. Estimated intakes of chemicals from environmental media (e.g. the amount of a chemical ingested from contaminated drinking water) can be compared to the RfD. RfDs are derived from human epidemiological studies or animal studies to which uncertainty factors have been applied (e.g. to account for the use of animal data to predict effects on humans). These uncertainty factors help ensure that the RfDs will not underestimate the potential for adverse noncarcinogenic effects to occur. Reference doses for the potential contaminants of concern may be found in Table 7 of the Baseline Risk Assessment.

6.4 RISK CHARACTERIZATION

In this final step of the risk assessment, the results of the exposure and toxicity assessments are combined to provide numerical estimates of the carcinogenic and non-carcinogenic risks for the site. Excess lifetime cancer risks are determined by multiplying the intake level with the slope factor. These risks are probabilities that are generally expressed in scientific notation (e.g. 1x10-6 or 1E-6). An excess lifetime cancer risk of 1x10-6 indicates that, as a plausible upper bound, an individual has a one in one million chance of developing cancer, over a 70-year lifetime, as a result of site-related exposure to a carcinogen. The NCP states that sites should be remediated to chemical concentrations that correspond to an upper-bound lifetime cancer risk to an individual not exceeding 10-6 to 10-4 excess lifetime risk. Carcinogenic risk levels that exceed this range indicate the need for performing remedial action at a site. As shown in Table 6-1, the total cancer risk for all exposure pathways is 8E-7 for the child trespasser and 1E-6 for the adult worker under the current use scenario. The total cancer risk under the future use scenario as shown in Table 6-2 represents a risk of 8E-07 for the child trespasser and 2E-05 for the adult worker while the risk is 4E-5 for the child resident and 5E-5 for the adult resident.

In order to characterize potential noncarcinogenic effects, estimated intake levels are compared with toxicity values. Potential concern for noncarcinogenic effects of a single contaminant in a single medium is expressed as the Hazard Quotient (HQ) (or the ratio of the estimated intake derived from the contaminant concentration in a given medium to the contaminant's reference dose). A HQ exceeding unity (1.0) indicates a potential for site-related noncarcinogenic health effects. By adding the HQs for all contaminants within a medium or across all media to which a given population may be reasonably exposed, the Hazard Index (HI) can be generated. The HI provides a useful reference point for gauging the potential significance of multiple contaminant exposures within a single medium or across media.

Table 6-1
Summary of Cancer and Noncancer Risks by Exposure Route
Current Use Scenario
Anaconda/Milgo Site
Miami, Florida

EXPOSURE	CHILD TRESPASSER		ADULT WORKER	
ROUTE	CANCER	HI	CANCER	HI
Inadvertent Ingestion of Soil	4E-07	0.01	1E.06	0.01
Inhalation of Dust	6E-10	0.00000003	4E-09	0.00000001
Dermal Absorption of Soil	4E-07	0.003	NA	NA
Total Current Risk	8E-07	0.01	1E-06	0.01

HI Hazard Index
NA Not Applicable

Table 6-2
Summary of Cancer and Noncancer Risks by Exposure Route
Future Use Scenario
Anaconda / Milgo Site
Miami, Florida

Exposure Route	Child Resident		Adult Resident		Lifetime Resident (Child + Adult)		Child Trespasser		Adult Worker	
	Cancer	HI	Cancer	HI	Cancer	HI	Cancer	HI	Cancer	HI
Inadvertent of Ingestion of Soil	7E-06	0.3	3E-06	0.03	1E-05	0.3	4E-O7	0.01	1E-06	0.01
Inhalation of Dust	6E-09	0.000001	5E-09	0.0000001	1E-08	0.000001	6E-10	0.00000003	4E-09	0.0000001
Dermal Absorption of Soil	2E-06	0.03	4E-06	0.01	6E-O6	0.04	4E-07	0.O03	NA	NA
Ingestion of Groundwater	1E-04	1.2	2E-04	0.5	3E-04	1.7	NA	NA	6E-05	0.2
Inhalation of VOCs	NA	NA	2E-05	NA	2E-05	NA	NA	NA	7E-06	NA
Total Future Risk	1E-O4	1.5	2E-04	0.5	3E-04	2.1	8E-O7	0.01	7E-05	0.2

HI Hazard Index
NA Not Applicable
VOCs Volatile Organic Compounds

The total Hazard Index, representing the noncarcinogenic risk for the current use scenario is shown in Table 6-1 and is equal to 0.01 for the child trespasser and 0.01 for the adult worker. Under the future use scenario in Table 6-2, the child trespasser remains the same while the future worker changes to 0.1. The child resident HI is 1.3 while the adult is 0.4. Based upon the results of the baseline risk assessment, the site, is protective of human health and the environment.

6.5 ENVIRONMENTAL ASSESSMENT (EA)

The environmental evaluation (EA), also known as the ecological assessment, is a "qualitative and/or quantitative appraisal of the actual or potential effects of a hazardous waste site on plants and animals other than people and domesticated species". Environmental receptors that are expected to inhabit the study area were identified during an ecological survey conducted as part of the RI. The survey consisted of both a field survey to determine current conditions and resident species, and a literature search to determine the historic ecology in this part of south Florida. The Florida Game and Freshwater Fish Commission file and the U.S. Department of the Interior Fish and Wildlife Service were contacted to determine if any occurrence of threatened or endangered species had been documented at or near the site. Current site conditions are quite different from a natural state. The site is located in a highly industrial/commercial section of Miami. Human presence, buildings, parking lots, and noise do not encourage or sustain many plant or animal species.

During the onsite survey, only 27 plant species (11 of which were native) and only 2 species of wild fauna (common skink and norway rat) were observed. There were no indications that any sensitive species utilize this area as habitat or during migration. The contaminants of concern at the site occur in surface soils and groundwater. Impacts on surface water bodies due to groundwater discharge are not expected due to the localized nature of groundwater contamination, shallow hydraulic gradient, and distance to the nearest surface water body the site lies 2 miles south of the Little River Canal and 2 miles northeast of the Miami Canal). Due to the existing development on the site, site surface soils are of limited value as a habitat for flora and fauna. Lacking suitable habitats and exposure routes for site contaminants, there is no identifiable risk to ecological receptors.

7.0 DESCRIPTION OF THE ACTION WITH MONITORING ALTERNATIVE

This remedy no applies to the site-related soil and groundwater contamination. Due to past soil remediation and the presence of low concentrations of groundwater contaminants that do not exceed health-based levels, no further action is necessary to address the Anaconda/Milgo site. Four post-RI supplemental sampling events will take place in order to verify that no site-related release of contaminants is occurring. As of the time this record of Decision document was written, one sampling event had already taken place and indicated that the contaminants found during the RI were no longer present in the groundwater at the site. If the results of the monitoring show that there is no unacceptable risk from exposure to site-related contaminants in the groundwater, then the site will be considered for deletion from the NPL. However, should groundwater monitoring indicate that the site poses a threat to human health or the environment, EPA, in consultation with the State of Florida, will reconsider the protectiveness of the "No Action with Monitoring" alternative and the feasibility of groundwater remediation will be re-evaluated.

8.0 DOCUMENTATION OF SIGNIFICANT DIFFERENCES

The selected remedy as presented in this decision document has no difference, significant or otherwise, from the preferred alternative presented in the proposed plan.